

WHAT IS CLAIMED IS:

sub a<sup>2</sup>

1. A calculator, comprising:

(a) means for recognizing handwritten input, wherein the handwritten input comprises mathematical operators and  
5 operands; and

(b) means for performing calculations indicated by the mathematical operators and operands.

2. A calculator, comprising:

10 (a) an electronic input surface;

(b) a stylus for tracing on the electronic input surface; and

(c) a processing circuit, coupled to the electronic input surface, for recording movements of the stylus as it  
15 traces across the electronic input surface, for recognizing the recorded movements of the stylus as characters, for converting the characters into mathematical expressions, and for performing calculations indicated by the mathematical expressions.

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3. A method of performing calculations in a calculator having an electronic input surface, a stylus for tracing across the electronic input surface, and a processing circuit coupled to the electronic input surface,  
5 the method comprising the steps of:

(a) recording movements of the stylus in the processing circuit, as the stylus is traced across the electronic input surface;

(b) recognizing the recorded movements of the stylus  
10 as characters in the processing circuit;

(c) converting the characters into mathematical expressions in the processing circuit; and

(d) performing calculations indicated by the mathematical expressions in the processing circuit.

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4. The invention as set forth in claim 3, wherein an electronic monitor is coupled to the processing circuit, and further comprising the step of displaying a result of the performed calculations on the electronic monitor.

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5. The invention as set forth in claim 4, further comprising the step of displaying the recorded movements of the stylus on the electronic monitor.

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6. The invention as set forth in claim 5, wherein the electronic monitor is the electronic input surface.

7. The invention as set forth in claim 3 above,  
wherein the mathematical expressions comprise operands and  
operators traced on the electronic input surface by the  
stylus.

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8. The invention as set forth in claim 7, wherein  
the operands comprise symbols.

9. The invention as set forth in claim 7, wherein  
10 the operands comprise digits.

<sup>4</sup>  
10. The invention as set forth in claim <sup>3</sup><sub>9</sub> above,  
further comprising the step of recognizing numbers from the  
relative placement of the digits, so that when the digits  
15 are traced horizontally in close proximity to one another  
on the electronic input surface, they are considered to be  
a single number.

*sub a<sup>3</sup>*  
20 11. The invention as set forth in claim 7 above,  
further comprising the step of recognizing mathematical  
expressions traced horizontally and vertically on the  
electronic input surface.

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12. The invention as set forth in claim 7 above,  
further comprising the step of computing a result for the  
calculations when the user traces a result operator on the  
electronic input surface.

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<sup>7</sup>  
~~13~~. The invention as set forth in claim <sup>6</sup>~~12~~ above,  
wherein the result operator is an equal sign in a  
horizontal mathematical expression.

<sup>8</sup>  
10 ~~14~~. The invention as set forth in claim <sup>6</sup>~~12~~ above,  
wherein the result operator is a result line in a vertical  
mathematical expression.

<sup>9</sup>  
15 ~~15~~. The invention as set forth in claim <sup>1</sup>~~3~~ above,  
further comprising the step of animating expressions on the  
electronic input surface as they are being calculated.

*Sub B* <sup>13</sup>  
20 ~~16~~. The invention as set forth in claim 3 above,  
further comprising the step of accepting corrections in the  
mathematical expressions traced by the stylus in the  
electronic input surface.

<sup>11</sup>  
25 ~~17~~. The invention as set forth in claim <sup>1</sup>~~3~~ above,  
further comprising the step of logically linking together a  
plurality of mathematical expressions inscribed on the  
electronic input surface.

*Sub* <sup>B<sup>14</sup></sup> 18. The invention as set forth in claim 17 above,  
wherein the mathematical expressions are linked in response  
to their proximity to one another on the electronic input  
surface.

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19. The invention as set forth in claim 17 above,  
wherein the mathematical expressions are linked in response  
to a user tracing a linking operator on the electronic  
input surface.

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20. The invention as set forth in claim 19 above,  
wherein the linking operator is an arrow having a tail  
proximal a first operand or mathematical expression and a  
head proximal a second operator or mathematical expression.

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<sup>15</sup>  
~~21~~. The invention as set forth in claim <sup>14</sup>~~20~~ above,  
wherein a result from the first mathematical expression is  
an operand in the second mathematical expression. ✓

*Sub* <sup>B<sup>15</sup></sup> 22. The invention as set forth in claim 20 above,  
further comprising the step of re-computing the second  
mathematical expression when the first mathematical  
expression is altered on the electronic input surface.

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sub 24  
23. The invention as set forth in claim 17 above,  
further comprising re-computing at least two mathematical  
expressions logically linked together, thereby  
incorporating a result of a first calculation into a second  
5 calculation.

24. The invention as set forth in claim 17 above,  
further comprising re-computing first and second  
mathematical expressions logically linked together, wherein  
10 the first and second mathematical expressions are on  
separate pages displayed on an electronic monitor, thereby  
incorporating the result of the first mathematical  
expression into the second mathematical expression.

15 25. The invention as set forth in claim 17 above,  
further comprising re-computing first and second  
mathematical expressions logically connected together,  
wherein the first and second mathematical expressions are  
in separate applications executed by the processing  
20 circuit, thereby incorporating the result of the first  
mathematical expression into the second mathematical  
expression.